#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

#### (19) World Intellectual Property Organization International Bureau



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#### (43) International Publication Date 2 June 2005 (02.06.2005)

#### **PCT**

### (10) International Publication Number WO 2005/050873 A1

(51) International Patent Classification<sup>7</sup>: H04Q 7/38, H04L 27/26

H04B 7/208.

(21) International Application Number:

PCT/KR2004/002278

(22) International Filing Date:

8 September 2004 (08.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 10-2003-0082150

> 19 November 2003 (19.11.2003) KR

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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(54) Title: METHOD FOR PARTITIONING RESOURCE SPACE, ASSIGNING PHYSICAL CHANNEL, AND ALLOCATING POWER IN OFDMA-BASED CELLULAR SYSTEM

Start Partition resource within single slot into resource **-**S610 spaces commonly in adjacent cells Partition resource spaces into resource subspaces **-**S620 commonly in adjacent cells Partition resource spaces and resource subspaces into resource sets according to sizes **~**S630 of physical channels in adjacent cells Assign physical channels with similar characteristics to resource sets in single **~**S640 resource space and resource subspace Allocate Tx power to physical channel using fixed Tx power from among physical **~**S650 channels assigned to resource set Allocate max Tx power to physical channel using variable Tx power from among **~**S660 physical channels assigned to resource set End

Disclosed is a method for partitioning (57) Abstract: resource spaces, and allocating physical channels and power in an OFDMA-based cellular system. A resource within a slot is partitioned into resource spaces in common in a plurality of adjacent cells, and the partitioned resource spaces are partitioned into resource sets according to sizes of physical channels in the adjacent cells. The physical channels classified by predetermined characteristics are respectively assigned to the partitioned resource sets within the resource space. Further, the resource space for transmitting traffic channels between two different cells is partitioned into resource spaces so that the traffic channels in the same subspace may be collided with each other, and a power control is applied between the collided channels to control the interference from the adjacent cells.

## WO 2005/050873 A1

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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#### Published:

with international search report